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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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EXAMINER

NGUYEN, S.

ART UNIT

PAPER NUMBER

2664
DATE MAILED:

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Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
08/981,519

Applicant(s)
Pfeiffer

Examiner
Steven Nguyen

Art Unit
2664



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on May 4, 2001

2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 35 C.D. 11; 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) 2-11 is/are pending in the applica

4a) Of the above, claim(s) _____ is/are withdrawn from considera

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) 2-11 is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claims _____ are subject to restriction and/or election requirem

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

a) ☐ All b) ☐ Some* c) ☐ None of:

- ☐ Certified copies of the priority documents have been received.
- ☐ Certified copies of the priority documents have been received in Application No. _____
- ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

15) ☒ Notice of References Cited (PTO-892)

16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

17) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). 13

18) ☒ Interview Summary (PTO-413) Paper No(s). 18

19) ☐ Notice of Informal Patent Application (PTO-152)

20) ☐ Other:

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DETAILED ACTION

Continued Prosecution Application

1. The request filed on 4/25/2001 for a Continued Prosecution Application (CPA) under 37 CFR 1.53(d) based on parent Application No. 08/918519 is acceptable and a CPA has been established. An action on the CPA follows.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claim 2, 8-9 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grude (USP 5619505) in view of Sperlich et al (USP 4644534).

As claims 8-9 and 11, Grube discloses a method of modulating and demodulating a digital data by using DMT for bidirectional data transmission via two wire line "Fig 9, Ref 162 is a twisted pair wire" having a transformer "col 9, lines 58-60" (See Fig 6-8, Ref 122 and 124). However, Grube does not show a transmission frame being divided into two set of time slots; a first set of time slots for a first transmission direction and a second set of time slots for a second transmission direction. In the same field of endeavor, Sperlich discloses the transmitted data and

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received data are separated by the time slots that are subdivided from a frame (See Fig 3, a frame is divided into a first "ts" and second period "te" and col 2, lines 48-54) wherein a TDM manager unit used for activating the transmitter and receiver for transmitting and receiving data during a frame period (See Fig 4, control unit and col 5, lines 3-68).

Since, Grude suggests a method of using DMT transceiver for full/half duplex by coupling a time division multiplex frame into a DMT transceiver (See col 3, lines 32 and col 11, lines 30-45). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to apply a well-known method such as dividing a frame into two set of time slots wherein first set of time slots for transmitting data and second set of time slots for receiving data by using a TDMA as discloses Sperlich into Grude's DMT transceiver. Even without, Sperlich's teaching, one of ordinary skill in the art would recognize a step of dividing the time slots into transmission and receiving set. The motivation would have been to reduce a manufacturing cost.

As claim 2, Grude and Sperlich does not disclose a number of time slots in a frame are 30 and K is 1. However, it would have been obvious to one skill in the art to divide a frame into the transmitted and received time slots such as the number of time slots divide into any numbers and using any number time slot for transmitted data.

4. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Grude and Sperlich as applied to claim 8 above, and further in view of Kageyama (USP 4144522).

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Grude and Sperlich fail to disclose a step of storing a transmission data into a buffer for transmitting to the receiving node and using ARQ method; However, in the same field of endeavor, Kageyama discloses a method of using an ARQ method for transmitting the data over a transmission channel until it does not receive a notifying of data transmission error from the received station (Col 20-36).

Since a method of using ARQ for retransmitting the data blocks is well known in the art at the time of invention. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to apply a method of ARQ for retransmitting the data blocks when an error occurs as taught by Kageyama's system into Grude and Sperlich's system. The motivation would have been to control the occurrence of an error in data transmission between the transmitting and receiving sides.

5. Claims 4-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grude and Sperlich as applied to claim 8 above, and further in view of Huebner (USP 3798608).

Grude and Sperlich fail to disclose a claimed invention. However, in the same field of endeavor, Huebner discloses in the event of error the data are modified by a logic inversion before retransmitting (Col 7, lines 57 to col 8, lines 4).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to apply a method of detecting an error in the transmitted data, modifying the transmitted data by a logic inversion before retransmitting the data as taught by Huebner's system

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into the Grude and Sperlich's system. The motivation would have been to reduce the retransmitted data if error occurs during the transmission.

6. Claims 6 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grude and Sperlich as applied to claim 8 above, and further in view of Cioffi (USP 5625651).

Grude and Sperlich fail to disclose the claimed invention. However, in the same field of endeavor, Cioffi discloses a method of selecting a carrier frequency of DTM for synchronization with frequency powered signal to reduce interference (Col 5, lines 1-26).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to apply a teaching of Cioffi such as selecting a carrier frequency according to the powered signal to reduce the interference into Grude and Sperlich's system. The motivation would have been to coordinate and reliably interpret signals sent from the remotes.

7. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Grude and Sperlich as applied to claim 8 above, and further in view of Bowman (USP 5151896).

Grude and Sperlich fail to disclose the claimed invention. However, in the same field of endeavor, Bowman discloses a method of allowing the TDM being carried out synchronously on the two wire lines with a result that either transmission or reception is performed simultaneously on the two wire lines (Col 14, lines 47-62).

Since, Sperlich suggests that the transmitted and received data must be transmitted in the same frame (See Fig 3). Therefore, it would have been obvious to one of ordinary skill in the art

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at the time of the invention was made to apply a method of allowing a station to transmit or reception simultaneously as taught by Bowman into Grude and Sperlich's communication system.

Conclusion

1. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven Nguyen whose telephone number is (703) 308-8848. The examiner can normally be reached on Monday through Friday from 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wellington Chin, can be reached on (703) 305-4366.

The fax phone number for this group is (703) 872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-4700.



Steven Nguyen
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July 12, 2001